

IMPROVING CARDIAC CARE

Ischemic heart disease (IHD) remains the single leading cause of morbidity and mortality in the U.S and among veterans who use the Veterans Health Administration (VHA). Cardiac catheterization and interventional procedures are primary therapy for IHD, and increased access to cardiac catheterization may lead to improved outcomes for VA patients. Previously there has been no mechanism to monitor and evaluate how such procedures are used in VHA. In response to the 2003 Cardiac Care Initiative, a national effort to improve cardiac care in VHA – the Cardiac Assessment, Reporting and Tracking System for Cardiac Catheterization Laboratories (CART-CL) – was developed to address the critical need for a systematic, system-wide method for tracking the use of diagnostic and interventional catheterization procedures, such as percutaneous coronary intervention (PCI).

Cardiac Assessment, Reporting and Tracking System

The mission of CART-CL is to develop and implement a national VA reporting system, data repository, and quality improvement program for procedures performed in VA cardiac catheterization laboratories. CART-CL is a collaborative effort between the Ischemic Heart Disease Quality Enhancement Research Initiative (IHD-QUERI), Patient Care Services, the Office of Quality and Performance, and the Office of Information. A recent VHA national directive mandates CART-CL installation and use by the end of 2006 for all VA catheterization laboratories. IHD-QUERI has had lead responsibility for the development and implementation of CART-CL since its inception.

CART-CL provides:

- Standardized data capture and reporting across all VA cath labs. The application automatically creates reports (pre-procedure assessment, cardiac catheterization, and PCI) for inclusion in the patient record. The application is tightly integrated with VA's Computerized Patient Record System (CPRS) to support providers in generating reports documenting the procedures, and helping to avoid duplication of work.
- Single national data repository for tracking and documenting cardiac procedures performed in VA cath labs.
- Core data elements that conform to the definitions and standards of the American College of Cardiology's National Cardiovascular Data Registry (ACC-NCDR).
- Centralized platform to support quality improvement, both local and national quality improvement programs.
- Extensible database structure to support modification based on input from test sites,

updating to evolving standards (e.g. as ACC-NCDR data elements change) and expansion of the clinical scope of the project.

What will CART-CL do for the VA and your facility?

- *Improve clinical care:* CART-CL will greatly improve the communication of cardiac procedure results by prompting documentation based on ACC care standards.
- *Support quality improvement:* CART-CL will directly inform quality improvement with the availability of accurate national clinical data on cardiac procedures.
- *Monitor patient safety:* CART-CL provides a unique mechanism to monitor patient safety around cardiac procedures. Features include documentation of pre-procedural data related to patient safety, such as patient ID check, and the transfer of data on allergies and adverse reactions and current labs.

CART-CL also will serve to capture workload, support program and system evaluation, as well as support research (clinical and health services research). It also will provide a platform for expansion to other procedures (i.e., peripheral interventions) and clinical areas (i.e., acute coronary syndrome care).

Since the start of permanent data storage in the CART-CL data repository in January 2005, the system has generated more than 20,000 reports on 9,216 patients by 348 VA providers at 24 sites. Feedback from clinicians at these sites has been overwhelmingly positive.

How Do I Learn More ?

If you are interested in learning more about CART-CL, please contact:

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WEB RESOURCES

For more information about IHD-QUERI visit their website at:
www1.va.gov/PS_IHDQuerI.

For more information about the QUERI program in general,
visit the national QUERI website at:
www.hsrdr.research.va.gov/queri.

Access QUERI's "Guide for Implementing Evidence-Based Clinical Practice and
Conducting Implementation Research" at:
www.hsrdr.research.va.gov/queri/implementation.

The IHD-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The research coordinator for IHD-QUERI is **Stephan Fihn, MD, MPH**, and the clinical coordinator is **John Rumsfeld, MD, PhD**. This executive committee includes other experts in the field of ischemic heart disease, including: Jeroan Allison, MD, MS; Marilyn K. Douglas, PhD, RN; Ross Fletcher, MD; Mary K. Goldstein, MD, MSc; Frederick Grover, MD; Paul Allen Heidenreich MD, MS; Robert L. Jesse, MD, PhD; Harlan Krumholz, MD, SM; Greg Larsen, MD; Ken Morris, MD; Laura Petersen, MD, MPH; Eric Peterson, MD, MPH; and **Anne Sales, MSN, PhD** (Implementation Research Coordinator).